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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,060	02/11/2004	Akiko Hirao	08411.0001	3322

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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,060

Applicant(s)

HIRAO ET AL.

Examiner

Martin J. Angebranndt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/3/04, 9/23/04 & 2/11/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/3/04, 9/23/04 & 2/11/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,4-8,14 and 16 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kurland et al. '970.

A polycarbonate substrate provided with 200 nm (0.2 microns) glass as the moisture barrier and a dichromated gelatin (a naturally occurring polymer) as the photosensitive layer is described in example 2.

4. Claims 1,3,4-8,14,16 and 18-19 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Wreede et al. '409.

Figure 1 has a plastic substrate, a moisture barrier layer 11a of 100-1000 nm silicon nitride, a layer 11b of 100-500 nm silicon dioxide, the organic recording layer (12), layer 13a or parylene, layer 13b of 200-500 nm silicon nitride, layer 13c of 100-200 nm silicon dioxide, layer 15a, of silicon dioxide, layer 15b of silicon nitride and layer 15c of silicon dioxide. (3/26-5/68).

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The recording layers are dichormated gelatin, photographic emulsions, diazo gelatin, and other gelatin based materials. (6/41-65).

The difference in the refractive index of the layers applied to the backside of the substrate and the substrate will increase the refractivity and on this basis is considered a reflective layer.

5. Claims 1-5,8-10,13-17 and 19-20 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Wreede et al. '211.

Wreede et al. '211 shows figure2, where moisture barriers (15) are applied to the polymeric substrates (14,12,20 and 22), layers 16 and 24 are norland adhesive and the recording layer is layer 18 and only gelatin based materials or the photopolymer DMP-128 are disclosed for this (2/9-4/5). The disclosed materials are silicon dioxide, tin oxide and indium oxide. (2/31-38). The use of plural substrate provides the required support for the photosensitive layer (2/26+)

6. Claims 1-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wreede et al. '211, in view of Wreede et al. '409 or Kurland et al. '970.

It would have been obvious to one skilled in the art to modify the cited example of Wreede et al. '211 by using thicknesses known to be useful in forming moisture barriers in holographic recording media, such as the 100-500 or 200 nm disclosed by Wreede et al. '409 or Kurland et al. '970.

7. Claims 1-5,8-10 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horigoma et al. JP 2002-123949 (machine translation provided), in view of Wreede et al. '211.

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Horigoma et al. JP 2002-123949 teaches a holographic recording medium shown in figures 1 and 6, where the layer 5 is a reflective layer, layer 4 is a transparent substrate (in figure 6 it is grooved), layer 3 is a photopolymer and layer 2 is a transparent substrate. [0033].

It would have been obvious to one skilled in the art to modify the medium exemplified by figure 6 of Horigoma et al. JP 2002-123949 by adding moisture barrier layers, such as taught by Wreede et al. '211 to prevent moisture damage and shifting of the replay. Further it would have been obvious to one skilled in the art to add the other substrates and adhesive layers to increase the stability/rigidity as discussed by Wreede et al. '211.

8. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horigoma et al. JP 2002-123949, in view of Wreede et al. '211 combined with Wreede et al. '409 or Kurland et al. '970.

In addition to the basis provided above, it would have been obvious to one skilled in the art to modify the holographic recording media rendered obvious by the combination of Horigoma et al. JP 2002-123949 and Wreede et al. '211 by using thicknesses known to be useful in forming moisture barriers in holographic recording media, such as the 100-500 or 200 nm disclosed by Wreede et al. '409 or Kurland et al. '970.

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 7031037 in view of Wreede et al. '211 combined with Wreede et al. '409 or Kurland et al. '970.

It would have been obvious to one skilled in the art to modify the medium claimed in U.S. Patent No. 7031037 by adding moisture barrier layers, such as taught by Wreede et al. '211 and using thicknesses known to be useful in forming moisture barriers in holographic recording media, such as the 100-500 or 200 nm disclosed by Wreede et al. '409 or Kurland et al. '970 with a reasonable expectation of preventing moisture damage and shifting of the replay of the holograms.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirao et al. '457 and Matsumoto et al. '831 correspond to the co-pending application identified by the applicant.

Biles '444 teaches moisture barrier layers for holography and is cumulative

Hormai et al. '798 (fig 2) and Furuya et al. JP 2002-063733 (figure 1) teach holographic recording media with servo features.

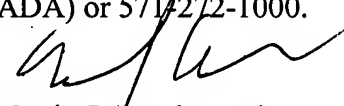
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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebrannndt whose telephone number is 571-272-1378.

The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Martin J. Angebrannndt
Primary Examiner
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11/16/06